



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,530	04/01/2004	B. Ryland Wiggs	N1189	1575

7590 04/25/2005

Wadley & Patterson, P.C.
Bank of America Plaza
Suite 2020
414 Union Street
Nashville, TN 37219

EXAMINER

ALI, MOHAMMAD M

ART UNIT PAPER NUMBER

3744

DATE MAILED: 04/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary

Application No.

10/815,530

Applicant(s)

WIGGS, B. RYLAND

Examiner

Mohammad Ali

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-7, 10, 11, 13-15, 19-21, 23-25, 28, 29 and 31-33 is/are rejected.
- 7) ☒ Claim(s) 4, 8, 9, 12, 16-18, 22, 26, 27, 30 and 34-42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/06/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 29 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The disclosure "interior air heat exchange means rejects heat into the interior air at a rate equal to the first interior air heat exchange means" fails to point out distinctly the amount of heat rejected by the first interior heat exchange means with the second interior heat exchange means. The amount of heat and the heat exchange means are two different things. A heat exchange means can reject or absorb a certain amount of heat but a heat exchange means cannot be equated with an amount of heat.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-7, 10-11, 19-20, 23-25, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al., (5,598,887). Ikeda et al., disclose a heat pump system

including dehumidification comprising a refrigerant, refrigerant transport tubing 20-25, a compressor 1, interior heat exchange means 4, 5, and exterior heat exchange means 3, comprising providing a first interior heat exchange 4 to withdraw heat from the interior air, situated between the system's exterior heat exchange means 3 and the system's compressor's refrigerant gas/vapor intake point, and providing a second interior air heat exchange means 5 to reject heat into the interior air, situated between the system's compressor's refrigerant gas/vapor discharge point and the system's exterior heat exchange means 3. The main cooling circuit is provided with ON-OFF valves 15-17 and an expansion valve 6 and the circuit combining the interior heat exchange means 5 is provided with check valves 11-13 and an ON-OFF valve 14. See Fig. 1.

Claim Rejections - 35 USC § 103

Claims 13-15 and 31-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ikeda et al. Ikeda et al., disclose the invention substantially including both the air handler F. Examiner considers the air handler F for first interior heat exchange means 4 and the second interior heat exchange means 5. Alternatively, choosing a separate air handler for each interior heat exchange means is an obvious choice one individual skilled in the art since there is no criticality or unexpected result from it.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. Ikeda et al., discloses the invention substantially as claimed as stated above. However, Ikeda et al., do not disclose a disengaged position of a solenoid or a check valve of the second interior heat exchange means but Ikeda et al., disclose removed

Art Unit: 3744

valve position with pipe 25 of the second interior heat exchange means 5 circuit during a cooling mode. See Fig. 5. It indicates that it would be obvious to one skilled individual to stop 12-12 or 14 in Fig. 1 to disengage the second heat exchange means 5 during the cooling mode.

Allowable Subject Matter

Claims 4, 8-9, 12, 16-18, 22, 26-27, 30, 34-42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is 703-308-5032. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Esquivel Denise can be reached on 703-308-2597. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/815,530
Art Unit: 3744

Page 5

Md. Mohen Ali
Mohammad M. Ali
April 20, 2004